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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/630,993	07/30/2003	John Edmund Mackiewicz	R.75385(03/7543)	7733

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EXAMINER	
NGUYEN, XUAN LAN T	
ART UNIT	**PAPER NUMBER**
3683	

DATE MAILED: 06/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/630,993	MACKIEWICZ, JOHN EDMUND	
	Examiner	Art Unit	
	Lan Nguyen	3683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 May 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *05 May 2004* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *07/30/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Species B, figure 9, in the Response dated 5/05/04 is acknowledged. The traversal is on the ground(s) that all the claims are generic. This is not found persuasive because it is found that claims 1, 2, 6-8, 10 and 11 are generic. Claims 3-5 and 9 are pertaining only to figure 9. All claims are being examined in this Office Action for pertaining to the elected embodiment of figure 9.

The requirement is still deemed proper and is therefore made FINAL.

Information Disclosure Statement

2. It is noted that the Non-Patent Documents, submitted on 7/30/03, are not in the file. It is requested that the Applicant re-submit said documents with the Response to this Office Action.

Drawings

3. The drawings were received on 05/05/04. Figures 1-8 are approved. Figure 9 is objected. The reference w' should be w. The distances L1, L2, d1 and d2 are illustrated incorrectly, see specification, paragraph [0020].

Specification

4. The disclosure is objected to because of the following informalities:

- Paragraph [0011], "lines 5-5" should be --line 6-6--.
- Page 6, line 6, 48', first occurrence, should be --48--.
- Page 7, line 9, "124" should be --154--.
- Page 7, line 12, "200" should be --120--.
- Page 7, line 13, "friction members" should be --carriers--.
- Page 9, line 4, 21' should be --212'--.
- Page 11, line 3, "approiate" should be --appropriate--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- In claim 1, lines 8, 24 and 25; and in claim 8, line 6 of page 13 and line 11 of page 14, the claimed feature "may" renders claims 1-11 indefinite. Claims 1-11 have been examined as "may" has been deleted from the claims.
- In claim 1, line 19, "second constraining" should be --said constraining--.
- In claim 1, line 23, "second projection" should be --said second projection--.
- In claim 1, line 24, "first projection" should be --first projection on said first carrier --.

- In claim 2, line 1, page 13, "and lateral force" should be --lateral forces--.
- In claim 5, line 2, "as a result braking force developed during a" should be --as a result, braking force developed during said--.
- In claim 6, line 2, "a" should be --said--.
- In claim 8, line 5, "to opposes" should be --to oppose--.
- In claim 8, line 11, page 14, "whenever" should be --when--.
- In claim 8, line 12, page 14, "encounter thickness" should be --encounter said thickness--.
- In claim 8, line 13, page 14, "of stress" should be --of lateral stress--.
- In claim 9, lines 5 and 6, "when a rotor is rotating in a forward direction said first projections will always engage an abutment surface before said second projections engage an abutment surface." should be -- when a rotor is rotating in a forward direction, said first projections will always engage said first and second abutment surfaces before said second projections engage other abutment surfaces --.
- In claim 10, line 2, "second carriers reduces the introduction surging during a brake application" should be --second carriers reduces the introduction of lateral force surging during said brake application--.
- In claim 11, lines 3-5, "is traveling in a reverse direction to prevent the development of stress force into an anchor when a high thickness on a rotor passes between the first and second friction members" should be --is traveling in a reverse direction to prevent the development of a lateral stress force into said

anchor when an increase in thickness on said rotor passes between the first and second friction members--.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-6 and 8-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Johnson et al.

Re: claims 1 and 2, Johnson et al. show a disc brake, as in the present invention, comprising: an anchor having first and second rails 40, 42 that align first and second friction members 80, 82 with a rotor 18, said first and second friction members being respectively moved into engagement with first and second radial surfaces on said rotor to develop a brake force that opposes the rotation of said rotor to effect a brake application, said brake force being communicated through said first and second friction members into said anchor during the brake application characterized in that a thickness of said rotor between corresponding positions on said first and second radial surfaces vary; and in that said first rail 40 has a first section, in figure 3 first section of rail 40 engages friction member 80, and a second section, in figure 3, second section engages friction member 82, each of which has a constraining surface separated from a bearing surface, as shown in figure 4, and in that said second rail 42 has a first section and a

second section each of which has a constraining surface separated from a bearing surface, same as rail 40 but not illustrated, and in that said first friction member 80 has a first carrier 84 with a first projection on a first end and a second projection on a second end, said first projection on said first carrier being located adjacent said constraining surface in said first section of said first rail and said second projection being located adjacent said constraining surface in said first section of said second rail, as shown in figure 3; and in that said second friction member 82 has a second carrier 90 with a first projection 94 on a first end and a second projection 94 on a second end, said first projection 94 on said second carrier being located adjacent said constraining surface in said second section of said second rail and said second projection 94 being located adjacent said constraining surface in said second section of said first rail as shown in figure 3, and in that said first projection on said first carrier and said first projection on said second carrier respectively engage said bearing surface of said first section of said first rail and said constraining surface of said second section of said second rail during said brake application, as discussed in column 4, lines 57 to end, such that said second projection on said first carrier pivots with respect to said first projection on said first carrier and said second projection on said second carrier pivots with respect to said first projection on said second carrier when said first and second friction members encounter thickness variations in said rotor. Note that Johnson is silent of a thickness variation in the rotor. However, said thickness variation in a rotor is an inherent condition of rotors in disc brake systems. Johnson's first and second friction members engage the rotor in the same manner, pushing and pulling on the two rails as

discussed in column 4, lines 57 to end, as the instant invention. It is inherent that the first and second friction members of Johnson would pivot sequentially when encounter thickness variations in the rotor during a brake application.

Re: claim 3-5, please see column 3 line 53 to column 4, line 11.

Re: claim 6, it is inherent that brake torque surge is reduced due to the manner in which the first and second friction members of Johnson's brake engage the rotor.

Re: claims 8 and 9, the discussion of the rejection of claims 1 and 2 above meet the limitations of claim 8.

Re: claim 10, it is inherent that brake torque surge is reduced due to the manner in which the first and second friction members of Johnson's brake engage the rotor.

Re: claim 11, Johnson further shows the brake operation when the vehicle is in a reverse direction in column 4, lines 54 to end.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson et al. in view of Yukoku.

Johnson's disc brake, as rejected in claim 1 above, lacks spring means to prevent rattling. Yukoku teaches the concept of using spring means 12 engaging the

projections of friction members 1 in order to prevent rattling in a brake system. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Johnson's disc brake with spring means as taught by Yukoku to prevent rattling in a brake system in order to improve the comfort level of an operator of the vehicle.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Le Deit and Tsuruta et al. show various other disc brake assemblies.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lan Nguyen whose telephone number is 703-308-8347. The examiner can normally be reached on M-F, 8 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Lavinder can be reached on 703-308-3421. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lan Nguyen 5/28/04
Lan Nguyen
Patent Examiner
A. U. 3683